**QUESTIONS FROM THE WHOIS POLICY REVIEW TEAM TO ICANN STAFF**

**OCTOBER 2011**

In responding to the Whois Policy Review Team’s 27 September questions, ICANN Staff interpreted the Team’s request as referring to *internationalized registration data* displayed in WHOIS. Internationalized Registration Data (IRD) for gTLDs refers to the possibility of having registration data for domain names, e.g., domain name (IDNs), contact name, address, etc. represented in character sets other than US-ASCII. In addition, IRD can be used without IDNs (e.g., a Chinese person registering an US-ASCII name) and vice versa (e.g., a US person registering an IDN name).

The WHOIS protocol has not been internationalized. It lacks a mechanism to indicate the character set, and is therefore unable to consistently support internationalized registration data (see [RFC 3912](http://www.ietf.org/rfc/rfc3912.txt) and [RFC 4690](http://www.ietf.org/rfc/rfc4690.txt)). Similarly, ICANN registry and registrar agreements for the most part do not prescribe the language, or scripts the data should be in, nor character encodings to be used.

With the increasing adoption of IDNs, there may be a higher demand for IRD. Thus, these responses to the WHOIS review team’s questions are based on the premise that such a trend will continue, and more registries and registrars will support the submission, query and display of IRD.

**1. How is the new gTLD program addressing Whois policy for IDNs?**

WHOIS output specification is defined in the new gTLD applicant guidebook (see Section 1, Specification 4 of draft registry agreements: <http://www.icann.org/en/topics/new-gtlds/rfp-clean-19sep11-en.pdf>). This specification dictates the format of the WHOIS output as well as formats for individual data elements. However, this specification does not address Internationalized registration data.

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The WHOIS service delivered via an interactive web page (HTTP), could in theory handle the query and display of IRD. However, there are no technical standards on how they are to be queried or displayed. In absence of standard specifications, some gTLD registries and ccTLDs have developed registry-specific solutions. These are documented in section 3.4 of this report (<http://gnso.icann.org/issues/ird/ird-draft-final-report-03oct11-en.pdf>). However, these registry-specific solutions (mentioned above) have led to inconsistent user experience as well as interoperability issues.

Thus with the above issues mentioned, IRD was not specified in the Applicant Guidebook. However, we recognize the importance of this issue, and are working actively with the community to address it. These efforts are summarized in question 4 below.

1. **What agreements currently are in place that addresses Whois policy and IDNs (including for registrars and registries)?**

**Registries**

For current registries, .CAT has considerations for the query and display of IRD. *See* Appendix S — Part VI, Public Whois Specification available at <http://www.icann.org/en/tlds/agreements/cat/cat-appendixS-22mar06.htm>. Note, however, the solution adopted by .CAT is not standard and is subject to change as the result of standardization efforts.

In addition, .TEL’s Special Access Web-based Service output specifies UTF-8 encoding to support the input and output of non-US-ASCII characters. (*See* Appendix S — Part VI, Public WHOIS Specification, http://www.icann.org/en/tlds/agreements/tel/appendix-s-02feb11.htm)

Most registry agreements do not specify the character set of the output. A few even specified the use of US-ASCII as the output encoding (e.g. see .info, .name, .org, .pro, .travel registry agreements), in other words, no support for internationalized registration data.

**Registrars**

ICANN's RAA and Whois-related Consensus Policies do not specifically address IRD or IDN registrations, but IDN registrations are subject to the same requirements as all other registrations:

* The Registrar Accreditation Agreements (both 2009, <http://www.icann.org/en/registrars/ra-agreement-21may09-en.htm>, and 2001, <http://www.icann.org/en/registrars/ra-agreement-17may01.htm>) include multiple obligations under Section 3 requiring registrars to collect and maintain Whois data; to provide public access to the data; to retain the data for a specified period of time; to escrow data as specified by ICANN.
* The Whois Data Reminder Policy, <http://www.icann.org/en/registrars/wdrp.htm>, which requires registrars to at least annually, present to the registrant the current Whois information, and remind the registrant that provision of false Whois information can be grounds for cancellation of their domain name registration. Registrants must review their Whois data, and make any corrections.
* The Whois Marketing Restriction Policy, <http://www.icann.org/en/registrars/wmrp.htm>, which requires registrars to impose certain marketing restrictions on the use made by anyone who acquires bulk access to the registrar’s Whois data.
* The Restored Names Accuracy Policy, <http://www.icann.org/en/registrars/rnap.htm>, which requires a registrar that restores a name (from the redemption grace period) that had been deleted on the basis of submission of false contact data or non-response to registrar inquiries, to place the name on Registrar Hold status until the registrant has provided updated and accurate Whois information.

There are also Advisories that may be of interest to the Team:

* Registrar Advisory Concerning the "15-day Period" in Whois Accuracy Requirements, <http://www.icann.org/en/announcements/advisory-03apr03.htm>, which clarifies registrars' requirement to “take reasonable steps to investigate” claims of Whois inaccuracy and to provide some clarity with regard to when it may be appropriate to cancel registrations.
* Registrar Advisory Concerning Whois Data Accuracy, <http://www.icann.org/en/announcements/advisory-10may02.htm>, which was published to promote registrar and community understanding about registrars’ current obligations under ICANN's Registrar Accreditation Agreement with respect to Whois data accuracy. It was the first detailed description of various provisions in the RAA and how registrars could ensure that they fulfilled their obligations with respect to Whois data accuracy.
1. **What plans do ICANN Compliance Staff have to ensure Whois policy compliance for (gTLD) IDNs (including how you will meet the requirements for Whois in the new gTLD program)?**

Contractual Compliance staff’s role is enforcing the contractual requirements set out in the new registry agreements.  Our plans for both ASCII as well as IDN gTLDs are to use an automated monitoring tool to monitor and assess whether new gTLD registry operators provide the Whois service required and whether the form and format of such service meet the contractual requirements. These requirements are currently set out in Specification 4 (Specification for Registration Data Publication Services) of the proposed registry agreement associated with the Applicant Guidebook, which specifically provides:

* **Registration Data Directory Services.** Until ICANN requires a different protocol, Registry Operator will operate a WHOIS service available via port 43 in accordance with RFC 3912, and a web-based Directory Service at <whois.nic.TLD> providing free public query-based access to at least the following elements in the following format. ICANN reserves the right to specify alternative formats and protocols, and upon such specification, the

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1.7. The format of the following data fields: domain status, individual and organizational names, address, street, city, state/province, postal code, country, telephone and fax numbers, email addresses, date and times should conform to the mappings specified in EPP RFCs 5730-5734 so that the display of this information (or values return in WHOIS responses) can be uniformly processed and understood.

We understand these requirements may be subject to change (see recommendations on a number of possible models for internationalizing domain name registration data in the draft final report by the joint SSAC and GNSO working group (IRD-WG) <http://gnso.icann.org/issues/ird/ird-draft-final-report-03oct11-en.pdf>). If and when changes do occur and are reflected in the new gTLD agreements, the automated monitoring tool and our assessment methodology will need to be adjusted.

If the automated monitoring tool reveals that a registry is not complying with the Whois requirements (set out in Specification 4) or the service level requirements set out in Specification 10 (Registry Performance Specifications) of the proposed registry agreement, Contractual Compliance staff will follow established processes to pursue non-compliant registries. These compliance processes will include a manual review of the Whois service, inquiry to the registry, informal resolution, followed by escalated enforcement actions.

Enforcement of gTLD uptime service level agreements, including those that relate to registry Whois service will be one of the strategic metrics for the focus area of DNS security and stability, as set out in the draft version of ICANN’s 2012-2015 Strategic Plan <http://www.icann.org/en/announcements/announcement-6-03oct11-en.htm>

1. **What technical standards are there to support Whois policy compliance for IDNs (i.e. data model, services)?**

ICANN regards the support for IRD an important evolutionary step for WHOIS. To this end, Staff has been working actively with the community on this subject. In this section, we summarize efforts by ICANN Staff, ICANN community, and technical community.

**Staff Efforts**

In 2009, at the request of GNSO council, ICANN Staff compiled an inventory of technical requirements for the community’s consideration. Addressing IRD is one of those requirements. The final report is available here: <<http://gnso.icann.org/issues/whois/whois-service-requirements-final-report-29jul10-en.pdf>>

In 2010, ICANN technical Staff wrote a discussion paper. In that paper, we analyzed the technical shortcomings of the current Whois service and identified three potential options to address these technical deficiencies. We initiated community discussion of this paper in ICANN Cartagena meeting and San Francisco meeting. The paper and a record of community discussions can be found here <[https://community.icann.org/display/TEwhoisService/Technical+Evolution+of+WHOIS+service+wiki+page](https://community.icann.org/display/TEwhoisService/Technical%2BEvolution%2Bof%2BWHOIS%2Bservice%2Bwiki%2Bpage)>.

On 6 October 2011, the GNSO Council approved a charter for a GNSO community working group that will develop a survey to estimate the level of agreement that the conclusions and assumptions in the Inventory of Whois Service Requirements Report of 29 July 2010 have in the ICANN community. The Whois Survey Working Group plans to produce a draft survey to be delivered to the GNSO Council for approval by March 2012. Following approval, the Whois Survey Working Group plans to then conduct this survey for a period not less than thirty (30) days, delivering a draft report describing survey results and recommendations for next steps to the GNSO Council by October 2012.

**ICANN Community efforts**

The security and stability committee (SSAC) has called out this issue in SAC 037 and most recently in SAC 051. These papers are available at <http://www.icann.org/en/committees/security/ssac-documents.htm>

The Board acted by forming a joint SSAC and GNSO working group (IRD-WG). The group is tasked to study the feasibility and suitability of introducing display specifications for IRD. The WG has just issued the draft final report. Among the many recommendations, the draft Final Report finds that it is feasible to introduce submission and display specifications to deal with IRD and recommends a series of next steps that could be undertaken to further address the technical and policy issues identified in this report, including a recommendation that the GNSO Council request an Issue Report on the policy questions raised in this report. The Issue Report would consider whether it is desirable to translate contact information to a single common language or transliterate contact information to a single common script, and who should bear the burden and would be in the best position to address these issues. The IRD’s draft final report is available here: <<http://gnso.icann.org/issues/ird/ird-draft-final-report-03oct11-en.pdf>>

**Technical Community efforts**

The technical community has made several attempts to remedy deficiencies in the WHOIS protocol. e.g., WHOIS++ (RFC 1834), RWhois (RFC 2167), and CRISP/IRIS (RFC 3707). However, none of them have attracted implementers in the TLD space. A discussion is needed on how ICANN can work with the technical community to improve the adoption of existing or new standards for registration data directory service as defined in SAC 051.

Currently, there is an active discussion in IETF, see <<https://www.ietf.org/mailman/listinfo/weirds>>. It is possible that such discussions may lead to the creation of an IETF working group that will develop a new registration data access protocol that is based on HTTP (REST standard). If such an effort succeeds, it will offer full support for IRD.

**5. How is the application community working to make Whois available to end-users for IDNs (i.e. display/web based access, etc.)**

ICANN Staff is not aware of any coordinated efforts in the application community to properly support the display of IRD in end-user applications.

The difficulty for handling it at the client level is that developers have to know each registry’s approach for handling internationalized registration data and write registry specific code. Standardization efforts in IETF should eventually deprecate the need for registry-specific handling, and further allow the application community to provide a better-localized experience for the submission, query and display of IRD. Furthermore, if a HTTP based solution is specified, the browser would become the default client, thus obviating the need for a specialized WHOIS-IRD client.